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Credit Policies in Japan and Korea

A Review of the Literature

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Well-functioning bureaucracies, effective monitoring, and a high degree of financial discipline have contributed to the effectiveness of credit polities in Japan and Korea. But the two countries' credit policies are not without their critics.

This paper — a product of the Financial Policy and Systems Division, Country Economics Department — is part of a larger effort in PRE to study the impact of regulation in the financial sector. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Wilai Pitayatonakarn, room N9-003, extension 37666 (22 pages).

Japan and Korea have long been associated with extensive, generally successful government intervention in the financial system. But their credit policies have not gone uncriticized. Vittas and Wang survey the literature available in English on the operation and effectiveness of credit policies in these two countries. They divide the literature on the Japanese experience into three groups.

Papers in the first group argue that government intervention facilitated the financing of industry and promoted rapid industrialization during the period of reconstruction and high growth. These papers emphasize the role of indirect finance, the "overloan" position of the large city banks (their reliance on credits from the Bank of Japan for funding their loans to industrial corporations); the "overborrowing" or high leverage of industrial companies; and the artificially low level of interest rates.

The second group includes papers that accept that government intervention influenced financial flows, but maintain that its impact was not as great as the first group implied. Some papers deny that government maintained artificially low interest rates. Others argue that access to funds and the cowbell effect were far more important than credit subsidies. Most papers in this group also argue that private financial institutions played a leading part in financing the growing or modern sectors of industry and that most government support was directed toward declining and stagnant industries.

The third group of papers attributes a negative effect to government policy and maintains that economic growth would have been even higher if the financial markets were not subject to extensive regulation. Several papers argue that Japan's industrial adjustment process was slower and probably much costlier in social terms as a result of the Ministry of International Trade and Industry's (MITI) intervention; they challenge the view that Japan's high growth and successful industrialization were masterminded by MITI.

In the literature on the effectiveness of credit and industrial policy in Korea, very few authors, if any, challenge the view that government intervention was extensive in Korea. Indeed, many authors argue that government intervention may have retarded growth by distorting incentives and resource allocation.

An important feature of credit policy in Korea was the coercive nature of government intervention. Firms that failed to meet performance standards and expand exports were denied additional credit or had their loans recalled, while successful firms were given further access to credit on preferential terms. Interest rate subsidies in Korea, unlike Japan, were sometimes quite large.

Criticism of Korean credit policy focuses on the experience in the late 1970s when the drive for heavy industrialization was under way. Several papers argue that the drive was overambitious and costly and resulted in a serious misallocation of resources, although many of the targets were in fact achieved.

In general the relative success of credit policies in Japan and Korea is attributed to their well-functioning bureaucracies, effective monitoring, and financial discipline. These have limited the diversion of subsidized credit funds into speculative assets and have ensured that credit policies in these two countries have not suffered from the problems of adverse selection and moral hazard that have bedeviled directed credit programs and credit subsidies in other countries.

Credit Policies in Japan and Korea: A Review of the Literature

by
Dimitri Vittas
and
Bo Wang

Table of Contents

Introduction

This paper offers a brief survey of the literature that is available in English on the operation and effectiveness of credit policies in Japan and Korea. There is a vast, and somewhat confusing, literature on this subject, which is closely related to the issue of the effectiveness of industrial policy in the two countries.

There is a certain differentiation in the literature between Japan and Korea that probably reflects the different intensity of government intervention in the two countries. For this reason, the paper will deal separately with the experience of the two countries.

The purpose of this paper is not to provide a comprehensive survey of the literature but rather to summarize the main arguments in favor and against the proposition that government intervention in credit policy can be effective in promoting industrialization. In doing so, the paper will focus on a number of contributions that are representative of the positions taken by different authors.

The Japanese experience

The literature on credit policies in Japan can be divided into three main groups.

The first group covers those papers that argue that government intervention in the financial system played a crucial part in facilitating the financing of industry and promoting rapid industrialization during the period of high growth.

The second group includes papers that accept that government intervention influenced financial flows, but maintain that its impact was not as large as implied by the first group. Some papers deny that government policy maintained artificially low interest rates and emphasize that most government support was directed towards declining and stagnant industries rather than the dynamic sectors that mostly contributed to economic growth.

Finally, the third group attributes a negative effect to government policy and maintains that economic growth would have been even higher if the financial markets were not subject to extensive regulations.

Japanese credit and industrial policy has evolved over time in response to the changing needs and structure of the economy. Industrial policy and direct government allocation of funds were more important during the reconstruction period between 1945 and 1955. Government policy operated in a less direct fashion during the period of high growth between 1955 and 1973, although the financial system was rigidly segmented and subject to wide-ranging controls on interest rates. Finally, since the mid-1970s, credit policy has become less interventionist and a slow but steady process of financial liberalization has been under way.

The Japanese financial system had during the high growth era a number of features that, though not unique to it, combined together to give it a character that was quite distinct from that of Anglo-American or continental European financial systems. Suzuki (1980) has long identified four such characteristics in the preponderant role of indirect finance, the "overloan" position of the large city banks, i.e. their reliance on credits from the Bank of Japan for funding their loans to industrial corporations, the "overborrowing" or high leverage of industrial companies, and the artificially low level of interest rates[1]. Other authors have emphasized the role played by the main bank system, the close relations between banks and industry, the different roles played by debt and equity in the Japanese financial system and the financial intermediary role of large conglomerate groups, especially the general trading companies, in channelling funds to small firms at the periphery of different groups (Aoki 1988 and 1990, Horiuchi et al 1988, Horiuchi 1989, Corbett 1987, Elston 1981, Vittas and Brown 1982).

This paper focusses on a review of papers that discuss the direction of credit funds and the use of interest rate subsidies. It does not consider the arguments about the role of the main bank system and the other related issues, even though some of these issues have been covered in some the papers reviewed.

<u>The first group.</u> The most positive statement about the role of government policy in promoting industrialization is contained in an OECD report on Japanese industrial policy (OECD, 1972, pp. 11-31). In it, the then Vice Minister of MITI stated that MITI decided to establish in Japan industries which required extensive employment of capital and technology, such as steel, oil refining, petrochemicals, automobiles, aircraft, industrial machinery of all sorts, and electronics, including electronic computers.

The statement also emphasized that from a short-run, static viewpoint, encouragement of such industries would seem to conflict with economic rationalism, but from a long-range viewpoint, these were precisely the industries where income elasticity of demand was high, technological progress rapid, and growth of labor productivity fast. The policies used by MITI included import protection coupled with export promotion, controls on foreign investment and on purchases of foreign technology, financial aid to selected

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[1] Various authors have challenged in recent years the existence or uniqueness of these characteristics. As discussed below, Horiuchi disputes the proposition that interest rates were low. Ikeo (1987) mentions several studies in Japanese that argue that indirect finance is not a uniquely Japanese phenomenon but is commonly observed in advanced financial systems. Finally, Kuroda and Oritani (1980) have long challenged the view that the leverage of Japanese companies was unduly high. Allowing for differences in the valuation of assets and other accounting practices, they found that Japanese leverage was much closer to levels prevailing in European countries and not much lower than American levels.

industries through government lending institutions, selective tax incentives, and administrative leadership to prevent excesses in investment and production[2].

Eccleston (1986) refers to the positive discrimination of policy by asserting that elite firms in engineering, shipbuilding, steel and motor vehicles were given state aid on a massive scale, were sheltered from the ravages of competition by import tariffs, and were protected from cyclical recessions by state-organized cartels (p. 62). Eccleston does not provide many details to support his statement but Magaziner and Hout (1980) contain an analysis of government support that corroborates some of Eccleston's claims. Magaziner and Hout cover government policy and intervention in the steel, shipbuilding, motor cars (including car parts), industrial machinery and information electronics industries. Although they do not always give specific details about the extent of financial support provided to different industries, they contain an extensive discussion of various policy actions taken that often went much beyond the provision of finance[3].

The financial support offered to industry took several different forms, both direct and indirect. Many authors have argued that the cost of funds to industry was kept low by the general regulation of deposit and lending interest rates and by the use of preferential credit facilities that were directed at particular sectors. Suzuki (1980) stated that in postwar Japan, and particularly after 1955, the level of interest rates was kept low with the deliberate aims of reducing the cost of manufactured exports and stimulating investment (p. 37). Royama (1984) viewed the artificially low interest rate policy as an important element of the Japanese financial system that made the control of the Bank of Japan more effective and stimulated the financing of high growth industries (p. 4)[4].

The rigid segmentation of the Japanese financial system facilitated the operation of credit policy. The large city banks specialized in lending to

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2 It is not clear from the OECD statement when MITI decided to consciously develop comparative advantage in high-value-added industries. Zysman (1983) quotes a paper by Ueno (1980) in which the argument is presented that the BOJ objected to the policies of MITI on the grounds that the industries recommended by MITI were "the most inappropriate industries for Japan then in the eyes of the state theory of comparative cost" (p 240). On the other hand, Trezise and Suzuki (1976) implied a certain ex post rationalization by describing the MITI statement as an authoritative retrospective statement of MITI's accomplishments (p. 793).

3 Magaziner and Hout note, however, that industrial policy was not always successful and also mention that many industries (consumer electronics, motorcycles, and copiers) thrived without a significant government role (p. 54).

4 However, it is interesting to note that Royama argues in a later paper that "while it may first appear evident, actually the policy of artificially low interest rates is quite vague" (1988, p. 78).

large firms. They benefitted from the regulation of deposit rates but they were prevented from collecting too many deposits by branching restrictions that protected the position of small banks. Instead, city banks relied on BOJ financing for complementing their deposit funds. For most of the high-growth era, city banks operated with what is known as an "overloan" position. Many authors, including Eccleston and Zysman, have claimed that the "overloan" system gave the BOJ considerable leverage over the lending policies of the large commercial banks. Through moral suasion and administrative guidance, BOJ could encourage the banks to lend to some sectors or to refrain from lending to others.

Long-term industrial finance, for both fixed investment and working capital, was provided by the long-term credit banks. These were private financial institutions that were allowed to raise funds through issuing medium-term debentures. They often provided complementary finance to that made available by the commercial banks and the government financial institutions. In fact, in many cases, the long-term credit banks played an important part in identifying companies and projects worthy of financial support.

Financial support to sectors that did not have access to the large city banks was provided by small regional and local commercial banks, by many types of mutual institutions that specialized in offering financial services to small firms, farmers and workers, and by several government financial institutions that specialized in lending to high priority sectors, such as exports and investment projects as well as to agriculture, small busin ss and housing[5].

Government financial institutions were mostly funded from the Trust Fund Bureau which managed the resources collected by the postal savings bank, the postal insurance service and the social security system. The financial support of the Trust Fund Bureau was operated through the Fiscal Investment and Loan Program, which lay outside rigid budgetary restrictions. According to Eccleston (p. 67) and Okimoto (1986, p. 60), FILP loans accounted for roughly 30% of total capital to industry in the 1950s, although Okimoto also states that the share of FILP loans fell to just over 10% in the 1980s. Johnson (1978) states that in the period from 1953 to 1961, the government supplied through FILP loans between 38% (1953) and 21% (1961) of all capital invested in new industrial plants and equipment (p. 98).

Eccleston also underscores the dualistic nature of Japanese industry, which consisted of a relatively small number of large conglomerate groups that were usually protected during economic recessions and a large number of independent small firms that suffered the brunt of economic declines.

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5 As already noted, medium-size and small firms belonging to different conglomerate groups, or having long-term production and marketing contractual relations with them, received financial, and other kinds of support (production design, marketing, etc.) from the general trading companies.

The second group. The basic position of the second group is that government intervention in credit policy has influenced financial flows but its impact has not been particularly large. The main proponents of this view have been Teranishi and Patrick. Horiuchi also belongs to this group, although he appears to have challenged more forcefully than other authors several aspects of the conventional interpretation of Japanese credit policy.

Teranishi (1986 and 1990) has argued that the major part of the funds of private financial institutions was directed towards the growing or modern sectors of industry, especially those producing investment goods and exportables, and this was more or less the consequence of the free play of market forces. Government guidance or intervention was never truly effective, while most of the funds of government finance were supplied to declining industries, to low productivity sectors (agriculture and small firms) or for building the industrial infrastructure, such as electricity, etc. (pp 156-7). The same point is made by Horiuchi (1984a) who has emphasized that government financial support was directed towards declining or stagnant industries and has disputed the claim that Japanese financial policy tended to favor both big banks and big businesses for the purpose of promoting economic growth (p. 30).

Teranishi drew attention to two important features of finance to declining sectors: first, because of indivisibility of production factors, the rate of return in declining industries is lower during the adjustment period; and second, declining industries suffer from greater information problems. Both of these features deprive declining industries of adequate market finance, a gap that is filled by government finance. Thus, Teranishi emphasized the division of labor between private and public financial institutions, but also warned that government finance to declining industries may have led to prolonged adjustment periods and excessive investments in declining sectors.

Teranishi also discussed the stance of monetary policy and the question of who benefitted from the implicit subsidies of regulated deposit rates. As regards the former, in line with the views of Suzuki and Royama, Teranishi argued that the rigid segmentation of the financial system enabled the BOJ to pursue an accommodating monetary policy while maintaining a wedge between its own discount rate and call money rates. Implementation of an accommodating monetary policy was facilitated by window guidance, which was mainly applied on city banks and was generally more effective, the more segmented was the loan market. But Teranishi also noted that the effectiveness of window guidance was weakened over time by the use of arbitrage techniques, such as lending through agent banks. This forced the BOJ to extend the application of window guidance to a wider range of banks (1986 p. 160). Horiuchi (1984b) has argued, however, that monetary policy was not accommodating since if policy was passive, the call money rate at which banks lent to each other would not deviate from the official discount rate (p. 366).

As regards the implicit subsidy from regulated deposit rates, Teranishi calculated that the value of the interest differential between free and regulated deposit rates for the deposits held with city banks amounted to almost 25% of the value of government subsidies paid to industry. Teranishi noted that the dividend policy and branch expansion of city banks were regulated so that the only outlets for these subsidies were either lower loan rates or retention in the banks to be used for supporting further expansion of business credits. Horiuchi also states that the main beneficiaries of the regulated deposit rates were the large banks, who achieved a higher rate of profitability than industrial corporations during the period of high growth.

Horiuchi (1984a, 1984b and 1990) has argued that nominal lending interest rates were not low in Japan during the high-growth period because the widespread use of compensating balances increased the effective cost of loans[6]. Hamada and Horiuchi (1987) mention compensating balances ranging from 11% for large corporations with city banks to over 40% for small firms with savings banks and credit cooperatives[7].

Horiuchi has also argued that real interest rates were also high if nominal rates were deflated by the wholesale price index rather than the consumer price index. However, as noted by Kohsaka (1987), real deposit rates were slightly negative if they were adjusted by the consumer price index.

The segmented nature of the Japanese financial system was also highlighted by Patrick (1972). Patrick emphasized that the Japanese financial system was characterized by an inflexible structure of interest rates that was imposed by the authorities. This was true of both long and short rates and although changes in compensating balance requirements were effected, they were not sufficient to balance demand with supply. In such a system, credit rationing worked to the advantage of the largest borrowers (pp. 115-6).

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6 In this respect, it is worth noting an important difference in approach between Japanese and American economists. Many economists in the US have argued that the practice of compensating balances, that was also very widespread among American banks, was not used to increase the effective cost of loans but rather to bypass the prohibition of interest payment on demand deposits. The argument was that if compensating balances involved the maintenance of average rather than minimum balances, then a lower loan rate would provide compensation for balances that corporations would normally hold with their banks for their day-to-day transaction needs. Horiuchi does not appear to examine this possibility even though the payment of interest on demand deposits has also been prohibited in Japan.

7 Horiuchi is not clear on whether compensating balance requirements were based on minimum or average balances nor on whether such balances were placed in demand deposits (on which banks were not allowed to pay interest) or in interest-bearing time deposits. Suzuki (1980), however, states that compensating deposits were interest bearing and were based on average balances. Moreover, Suzuki suggests that compensating balances were, to some extent, held willingly by corporations both because they provided liquidity against future credit controls and because they were perceived by banks as contributing to the cementing of closer and stronger relationships. This was probably truer for larger corporations (pp. 46-47).

Patrick (1986) underlines the importance of macro-industrial policy, i.e. the general incentives to industry to invest, modernize and operate at internationally competitive levels and the favorable environment for household saving, mainly the achievement of high growth under moderate inflation. Presumably also the general disincentives to borrow contributed to a high level of household saving. But Patrick has argued that industry-specific policies have not been invariably successful and where they have failed (e.g. in shipping, aircraft and oil refining), they have involved high costs to consumers, savers and taxpayers (pp 21-2).

Patrick has also emphasized the point that low cost and big subsidies were not a major component of credit policies. Rather, access to funds and the cowbell effect, whereby private financial institutions joined in financing particular firms or projects, were far more important (Patrick, 1991).

From the Japanese industrial policy literature it is worth noting the concluding remarks by Okuno and Suzumura in a volume on the Industrial Policy of Japan co-edited with Komiya (1988). In it, Okuno and Suzumura emphasize that the high growth era was an era of conflict between policymakers and firms. Industrial policy was most effective when it supplemented the price mechanism and encouraged competition. It was least effective when it tried to eliminate excess competition and used direct intervention to induce restructuring and rationalization of industrial sectors. Government intervention and assistance to declining industries which involved the creation of recession cartels and the relocation of labor were seen as having mixed results. The use of trade restrictions to protect and foster infant industries or to create a countervailing force against foreign monopolies generally had positive effects as did the special tax measures and low-interest loans that were provided to some industries, especially the iron and steel and shipbuilding industries, and small and medium-size firms. Okuno and Suzumura also emphasize the positive role of government in collecting, processing and diffusing information.

<u>The third group.</u> The third group argues that industrial policy and government intervention in credit allocation had a negative effect on the allocation of resources and economic growth. According to Patrick (1986 p.20), the most articulate proponent of this view is Trezise (1976 and 1983) who has attributed Japan's success to the entrepreneurs and businessmen who took advantage of macrostability and market mechanisms and engaged in industrial investment and exports. Trezise mentions the many industrialists who prospered without explicit government support. Hirono (1988) has also argued that Japan's industrial adjustment process was slow and probably much costlier in social terms as a result of MITI's intervention than it would have been if it had been left to the operation of markets (pp. 244-5).

This group could also include papers from the Japanese industrial policy literature that have challenged the view that Japan's high growth and successful industrialization were masterminded by MITI. In discussing industrial performance in the high growth era, Komiya (1988) includes a long list of industries that achieved remarkable success with little government support (sewing machines, cameras, bicycles, motorcycles, pianos, zippers, transistor radios, color television sets, tape recorders, audio equipment, fishing gear, watches and clocks, calculators, electric wire, machine tools, numerically controlled machine tools, textile machinery, agricultural machinery, insulators, communications equipment, ceramics, nd robots). Komiya states that the majority of firms in these sectors started from nothing after the war, developed under their own power without any dependence on industrial protection and promotion or any particular benefits from industrial policy measures and would strongly disagree with the statement that industrial policy in Japan was extremely strong, systematic and comprehensive (pp. 7-8). Other authors who have expressed critical views about the effectiveness and efficiency of industrial policy in Japan include Kosai, Tsuruta and Uekusa, all in the volume edited by Komiya, Okuno and Suzumura (1988)[8].

Synthesis

In attempting to synthesize the literature on the effectiveness of credit policy in Japan, one is faced with a very serious handicap. There is no readily available, systematic and comprehensive discussion of the volumes of funds involved, the amounts of subsidy or the sectors receiving preferential allocation. Much of the debate is directed at refuting extreme positions taken either by those who attribute Japan's economic success to the implementation of its industrial policy and its alleged emphasis on supporting big firms and big banks or, at the other end of the spectrum, by those who deny any positive impact from such intervention.

However, an important contribution is made by those who chart a middle road, highlighting the positive aspects of Japanese industrial policy but also underscoring its many limitations. These commentators agree that the financial sector of Japan in the high-growth era was highly segmented. This segmentation may have been necessitated by the underdevelopment of the securities markets, the experience of very high inflation in the 1940s and early 1950s, and the information needs of the high growth era, but it conferred to the authorities greater control over the allocation of financial resources. However, contrary to the assertions of some authors (e.g. Zysman and Eccleston) there is no evidence that the BOJ used window guidance to influence the sectoral allocation of credit, other than perhaps to discourage lending for speculative purposes.

In practice, the Japanese industrial policy seems to have aimed at three different objectives: To pick and support winners, especially in areas where Japan could enjoy a dynamic comparative advantage; to phase out losers, i.e. to help the restructuring and reduction of capacity of those industries where Japan was no longer internationally competitive; and to provide the necessary

8 However, as already noted above, Okuno and Suzumura in their concluding remarks have adopted a more favorable attitude towards the implementation of industrial policy in Japan.

industrial infrastructure[9]. Thus, government regulation and intervention in the financial sector, through MITI, the Ministry of Finance (MOF) or the Bank of Japan (BOJ), did not focus exclusively on securing cheap finance for the most dynamic sectors, but appeared to aim for a balance between the claims of different sectors.

If these three elements of an industrial policy are accepted, then one would expect a number of practical implications to be reflected in the allocation of funds. For instance, financial support to successful, dynamic industries would decline rapidly over time since as a result of their very success, such industries would be expected to repay their loans and achieve financial independence. Even if successful companies may continue to rely on bank loans for financing their expansion plans, they would presumably cease to receive support from government funds. On the other hand, financial support to declining industries would probably last for longer periods. A basic objective of policy would be to smooth the adjustment process and reduce capacity in an orderly fashion in order to minimize dislocations in labor markets and regional economies. Thus, the provision of government financial support is likely to delay the adjustment, but whether this is economically beneficial or not would depend on the balance between the benefits and costs involved. Finally, financial support for industrial infrastructure would depend on the capital intensity of such infrastructure. In earlier periods when infrastructure meant investments in electricity, transportation and other heavy infrastructure, financial support was perhaps prolonged. But in modern times, much of support is directed towards research and development as well as education and training and this should not require as large outlays of capital as the development of public utilities.

Some economists have noted the decline in the proportion of FILP funds that went to support key industries. Ogura and Yoshino (1988) show that from 23.6% of the total in 1953-55, the share fell to 16.6% in 1956-60, 9.9% in 1961-65, 6.3% in 1966-70, 3.7% in 1971-75 and 2.9% in 1976-81 (p. 135). The share of FILP funds that supported industrial infrastructure remained broadly constant at around 24%, except for the most recent period when it fell to 18%. Funds for the modernization of low productivity sectors, such as small and medium-size industries, also accounted for a fairly constant share of around 20%. However, funds for the improvement of living conditions increased steadily from 23% in 1953-55 and reached 47% in 1976-81.

But in relation to GNP or to the financing needs of key industries, the relative importance of financial support to key industries may not have fallen as much. This is because the total resources of the Trust Fund Bureau and of the FILP program increased over time with regard to both the total assets of the financial system and gross national product as a result of the great success of the postal savings bank in mobilizing household deposits.

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[9] The extensive financial support for some traditional and relatively inefficient industries, such as agriculture, could be seen more as a social policy or a response to political pressures and less as a component of an active industrial policy.

Although it is not discussed in any detail, the amount of subsidy involved in preferential credits is generally considered to have been low, in the region of 1 or 2 percentage points below market rates. The subsidy was larger for loans of government financial institutions. For small firms, the interest rate subsidy probably covered the differential between the rate on loans obtained from informal sources and money market rates.

With regard to the general level of nominal and real interest rates, there is some debate in the literature. The impact of compensating balances on the effective nominal cost of loans depends on the size of balances, on their nature (i.e. whether they are based on average or minimum balances) and on their return (whether and how much interest they earn). If large corporations were required to maintain balances equal to 10% of loans and if the loan rate was 7%, then the effective loan rate would rise to 7.78% if balances earn zero interest, to 7.44% if they earn 3% interest and to 7.22% if they earn 5% interest. For smaller companies where compensating balances were reported to reach as high as 40%, the effective loan rate would rise from 7% to 11.67% with zero interest on compensating deposits, to 9.67% with 3% interest and to 8.33% with 5% interest. Thus, the impact of compensating balances may range from a trivial increase of a few basis points to an escalation of interest costs of nearly 500 basis points. Failure to provide more specific details about the size, nature and return of compensating balances weakens the argument that the effective cost of loans was substantially higher than posted rates.

Moreover, it is widely accepted that Japanese financial policy discouraged the supply of loans to households both for consumer credit and for housing finance purposes. This had clear implications for the level of household consumption and saving. Given the limited availability of credit facilities to households and the persistent wedge between producer and consumer prices, it is difficult not to conclude that the general level of interest rates was lower than it would otherwise have been.

The argument that real rates of interest were high during the high growth era is premised on the claim that the wholesale price index (WPI) is a more appropriate deflator than the consumer price index (CPI). To say the least, this is rather contentious. It is based on the argument advanced by McKinnon that the WPI is a better deflator because it represents the cost of claims on a broad basket of tradable and tangible goods, whereas the CPI depends heavily on nontradable and intangible services (McKinnon 1989, p. 35)[10]. In any case, most empirical studies agree that the rate of interest is not a major determinant of saving in most countries while, against the McKinnon thesis, one could argue that the CPI provides a better indication of the purchasing power of household savings.

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[10] According to McKinnon, manufactured goods are the main alternative to financial assets. However, as Gelb (1989, p. 3) emphasized, property (and perhaps gold and other nonmanufactured precious metals) occupy a dominant position in household portfolios in most developing countries.

Although there is considerable debate about the existence of "artificially" low interest rates and about the quantitative importance of preferential credit schemes, most commentators agree that low cost was not a crucial part of government support. Instead, greater emphasis is placed on the availability of finance and the cowbell or signaling effects of government action.

One surprising feature of the literature on the operation and effectiveness of credit policies in Japan is the absence of any reference to the potential for abuse and misuse of subsidized facilities and of any discussion of the preconditions that are required for a successful implementation of an active industrial credit policy. The problems of adverse selection and moral hazard, that have bedeviled the credit policies of many other countries, generally receive scant attention[11]. Perhaps this reflects the high level of efficiency of the Japanese civil service and the monitoring capabilities of banks but it is an issue that requires special attention and will be considered in greater detail after the examination of the Korean experience.

The Korean Experience

The literature on the effectiveness of credit and industrial policy in Korea cannot be easily divided into the same groups as that of Japan. Very few authors, if any, have challenged the view that government intervention was extensive in Korea. No authors have argued that industrial and credit policy in Korea was either exaggerated or did not matter much. But, at the same time, the argument that government intervention may have retarded growth by distorting incentives and resource allocation is made more frequently and more forcefully in the case of Korea than in the case of Japan.

In addition, very few authors have adopted a purist position in the case of Korea, arguing either that industrial policy was highly successful or that it had negative results and retarded growth. Rather, the majority of authors have highlighted both the benefits and costs of industrial policy and assessed specific policy actions rather than government intervention in general. Thus, in the discussion that follows the literature on credit policies in Korea will be classified by type of argument. It will first review arguments that highlight the benefits of active credit policies and then consider those that focus on the costs of such policies.

The operation of credit policy in Korea has gone through three distinct phases. In the 1950s and 1960s, credit policy was not industry specific but was oriented towards particular activities, mainly exports and industrial investment (Cho, 1989 and World Bank, 1987). Credit policy was initially supplemented by export promotion measures that included the use of multiple exchange rates, direct cash payments, permission to borrow in foreign

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[11] Elston (1981) mentions that some priority lending in the aftermath of the first oil crisis was later identified as having been used for speculation in land and commodities, thus contributing to the subsequent burst of inflation (p. 516).

currencies and permission to import restricted commodities under the export-import link (World Bank, 1987, p. 33). The export-import link allowed exporters to benefit from scarcity rents in heavily protected domestic markets. Most of these measures were replaced in the course of the 1960s by export incentives that relied on tariff exemptions for inputs to export products. However, access to subsidized credit continued to be a major plank of export oriented policies. Export performance was also encouraged by the use of trade promotion meetings, company specific export targets, close monitoring of exports, and special awards for export achievement.

Credit policy changed drastically in the 1970s during the drive for the development of heavy and chemical industries (HCI). During the HCI drive, the government relied heavily on its control of the entire credit system and provided "strategic" industries preferential access at substantially subsidized rates (World Bank, 1987, p. 39). The use of policy loans was pervasive. In the 1970s, between 43% and 50% of total lending went for preferential finance. Although the HCI drive was overly ambitious, HCI exports reached 56% of all exports in 1983 (p. 45).

During the 1970s, government policy was based on the development and growth of business conglomerates with the ability to invest in large scale plants that could be internationally competitive. The successes and failures of the HCI drive forced a change in government approach in the 1980s. First, the government became involved in industrial and financial restructuring of industries and companies in distress. As in Japan, Korean industrial and credit policy started to be preoccupied not only with "picking winners" but also with "phasing out losers". In addition, the focus of policy was reoriented towards producing a more balanced industrial sector that would not be so dominated by a few business conglomerates. As a result, lending to small and medium-size firms received greater attention (World Bank, 1987, pp. 48-56).

Benefits of credit policies. Perhaps, the most ardent advocate of the role of government intervention in promoting industrialization in Korea is Amsden (1989). Amsden maintains that in late-industrializing countries, the state intervenes with subsidies deliberately to distort relative prices in order to stimulate industrialization and economic activity. This has been true of most late-industrializing countries but in the case of Korea (as well as Japan and Taiwan), Amsden argues that the state has exercised discipline over subsidy recipients by imposing strict performance standards in exchange for the subsidies (p. 8). Amsden highlights the use of import protection, export promotion, industrial licensing, bias towards the large business conglomerates and availability of cheap debt finance as the main instruments of industrial policy that emphasized the development of industrial exports in sectors with high value added.

Many other authors have underscored the role of government intervention in Korean industrialization. Kuznets (1985) argued that credit allocation and control of access to foreign exchange were perhaps the main means of achieving the government's economic goals. The typical enterprise was highly leveraged and thus especially vulnerable to the reduction or withdrawal of credit (p. 53). Dornbusch and Park (1987) noted that Korea's policies did not represent a laissez-faire approach; intervention in the form of trade restrictions, subsidies and credit allocation was pervasive (p.403). They also argued that economic externalities and market imperfections provided the underlying logic for import substitution and export promotion. Tariffs and licensing were used to create a sheltered market for the development of infant industries, which were later directed towards the world market by subsidies, credit and exchange rate policies. The credit system channelled resources at subsidized rates to preferred activities.

Cho (1989) referred to the interest rate reform of the mid-1960s when real deposit rates were increased and argued that the reform increased the role of government in credit allocation because of the rapid expansion of bank deposits that were under strict government control. Directed credit programs, such as export finance, were then provided with greater subsidy (p.92). Cho also noted that the proportion of credit allocated to the industrial sector relative to its contribution to GNP was much higher in Korea than in other countries, while consumer loans and loans to "unproductive" sectors such as services and leisure were limited (p. 95).

An important feature of credit policy in Korea was the coercive nature of government intervention. The World Bank (1987) noted that industrial policy encouraged entrants with minimum equity stakes and stimulated competition but then selected future industry leaders on the "survival of the fastest growing" criterion (p. 121). Firms that failed to meet performance standards and expand exports were denied additional credit or had their loans recalled while successful firms were given further access to credit on preferential terms. The importance of the discipline exercised by government is also emphasized by Amsden (p. 140).

Unlike Japan where credit policy does not appear to have involved large subsidies but to have emphasized access to credit facilities for priority borrowers, in Korea interest rate subsidies were on occasion quite large. Cole and Park (1983, p. 190) and the World Bank (1987, p. 83) show that export and investment finance were made available at rates that were lower than market rates by between 5 and 24 percentage points in the 1960s and 1970s. Cole and Park also report studies that showed subsidies of between 7% and 28% of the gross capital stock of the manufacturing sector between 1970 and 1976 (p. 191). However, Rhee (1990) has argued that access to finance, especially by direct and indirect exporters, was more important that the cost subsidy.

Koo (1984) noted the incentives provided to exporters in the 1960s, which included exemption from import duties of intermediate goods that were used as inputs for export products, reduction of corporate taxes for exporters, and access to preferential financing facilities, but argued that the industrial incentive system had a marginal effect on export growth in this period, which followed closely the pattern dictated by international comparative advantage (pp 6-7).

Costs of credit policies. Much of the discussion of the costs of credit policies focusses on the experience in the 1970s when the HCI drive was under way. This was influenced by the overcapacity of many heavy industrial sectors that suffered large losses in the aftermath of the second oil crisis and the worldwide economic recession of the early 1980s.

Kwak (1984) argued that the industrial restructuring strategy of the 1970s was very costly. The preferred sectors expanded production capacity too rapidly, while firms did not have sufficient time to accumulate experience and digest new technologies. The resulting low quality products could not be exported and most firms were characterized by excess capacity, high production costs and low product quality. The unsupported sector was forced to borrow at very high rates from the informal market and the dual nature of the credit system created a major imbalance in the industrial structure of the country. Kwak has also argued that the low interest rate policy of the government caused an acceleration of inflation, a lowering of savings and a deterioration in the external balance. Kwak's main conclusion is that government should be patient and should allow private firms to make their own decisions. Resources should be allocated by the market mechanism with the interest rate playing its assigned role. Government should be extremely careful in providing sector specific incentives and direct government intervention in credit allocation can hardly be justified (pp. 43-47).

Koo (1984) also argued that the industrial targeting and import substitution policies pursued in the 1970s involved high economic costs. These included the building of excess capacity in the strategic HCI industries and the neglect of light manufacturing (pp 11-16).

The World Bank (1987) stated that the HCI drive was overambitious and resulted in serious misallocation of resources, although it also noted that many of its goals were in fact achieved. In evaluating results of specific industries, the World Bank underscored the major technical achievements in the steel industry and other sectors and the mixed results of the shipbuilding and motor car sectors (p. 45).

However, the World Bank also discussed extensively the problems caused by the overcapacity in some industries and the large losses suffered by individual firms or business groups. It included a major discussion of industrial policy issues with regard to declining industries, newly emerging growth sectors, conglomerate groups and small and medium-size firms. Although it generally advocated market-based policies, the World Bank allowed for government intervention in particular sectors. For this purpose, it developed a set of policy decision rules that could guide government intervention in industrial restructuring (pp. 113-121).

The World Bank, and other authors, also highlight two adverse effects of active industrial and credit policies. The first is the negative impact on the development of the financial sector. In Korea, the large losses suffered by many industrial groups have weakened the financial position of commercial banks, which have experienced a decline in their relative importance in the Korean financial system. Moreover, government involvement in credit decision making and in restructuring operations has deprived commercial banks of the opportunity to develop their own skills in approving credits and organizing workouts. Cole and Park (1983) have argued that the segmentation of the financial system, which may have contributed to its weakness, may have been the result of a deliberate effort on the part of the government to facilitate its directed credit allocation (p. 185).

The second effect is the problem of moral hazard. In general, the government's willingness to intervene in restructuring creates significant moral hazard. Given the prospect of government rescue in the event of adverse business conditions, firms are more willing to undertake risky strategies, while banks may be willing to finance such risky strategies because they also expect to be bailed out by government intervention. Moreover, once adverse conditions materialize, firms and lenders may postpone corrective action and adjustment and thus increase the economic cost of restructuring (World Bank, 1987, p. 116). Distress finance has an important part to play in supporting firms that face financial difficulties but are otherwise fundamentally sound. But government intervention must be selective and should avoid distorting incentives for risk taking.

Synthesis. As in the case of Japan, industrial and credit policy in Korea were most successful when they supplemented the price mechanism and aimed for achieving international competitiveness. However, the policy faltered when it forced a pace of adjustment that was too fast for firms to digest.

The general view regarding the Korean experience in the 1960s is captured well by Cole and Park (1983) who argued that although export industries received considerable financial support it is not easy to determine the extent to which that support was crucial for promoting exports. This is because exports received many other forms of subsidies. Moreover, Cole and Park noted that it may be argued that exports could have risen as fast as they did under a liberalized financial system and free financial markets if all relative prices, including the exchange rate, had been maintained at a market level. However, they also noted that this is a proposition that it is very difficult to prove or disprove. What the Korean experience did show, however, according to Cole and Park, is that the emphasis of financial policy on savings mobilization and export promotion was not inappropriate in view of the successful expansion of exports and healthy growth of the economy (p. 269).

Dornbusch and Park (1987) emphasize the leading role played by government in all stages of industrial adjustment. During the early stages of industrialization, exports were singled out for support with subsidies, credit and an attractive real exchange rate. When the situation called for more capital-intensive and technology-intensive industries, import restrictions and finance were amply provided to stimulate investment and generate profitability for infant industries. And when the economy became too complex, government policy placed greater emphasis on liberalized markets, while industrial policy was reoriented towards small and medium-size firms and towards supporting research and development for high-tech industries (pp. 438-9).

Westphal (1990) notes that the Korean government's industrial policies have been used within the context of a consistent strategy of industrialization. The objective of the strategy has been to build comparative advantage in new industries or to rebuild it in old ones. Westphal concludes that selective intervention has greatly contributed to Korea's remarkable success. But Westphal also argues that to be effective selective intervention through credit rationing, import protection and other measures must be combined with coercive interventions to compel warranted investments to realize the latent externalities involved (pp. 53-56).

Concluding Remarks

The preceding discussion shows that credit policies may stimulate industrialization and economic growth if they mainly correct for the shortcomings of financial markets and do not involve large subsidies that distort incentives. Credit and industrial policies work best if they encourage competition and supplement the price mechanism, for instance by offering small credit subsidies but avoiding the imposition of lending quotas and the detailed direction of credit funds. However, many economists emphasize that a number of prerequisite conditions must be met for credit policies to work. The relative success of credit policies in Japan and Korea is attributed to their well functioning bureaucracies, the effectiveness of monitoring and the high degree of financial discipline. These have limited the diversion of subsidized credit funds into speculative assets and have ensured that credit policies in these two countries have not suffered from the problems of adverse selection and moral hazard that have bedeviled directed credit programs and credit subsidies in other countries. In addition, the importance of maintaining macroeconomic stability, which implies moderate inflation and small budget deficits, is also stressed.

The absence of these preconditions from many developing countries lead many economists to conclude that the positive experience of Japan and Korea with credit and industrial policies cannon be easily replicated. However, the same preconditions seem to be required for the successful operation of market-based policies. For instance, there is now widespread agreement that macroeconomic stability, good information systems, effective monitoring and financial discipline are essential for the smooth functioning of efficient financial systems. The question for developing countries is whether there is scope for well designed and narrowly focussed directed credit programs in the transition from inefficient and malfunctioning financial systems to modern and efficient ones.

From an economic viewpoint there are two potential errors that can be made in financial markets with or without credit policies: providing finance for unproductive purposes or to unprofitable firms and denying credit from productive purposes or profitable firms. Both errors waste resources and slow economic growth. Mistakes are unavoidable even under fully privatized and "undirected" financial systems. The recent experience of Anglo-American and Scandinavian financial systems underscores this point. Applying allegedly sophisticated techniques of credit appraisal and employing large numbers of skilled and experienced bank examiners have not prevented American banks from making large mistakes and misallocating resources from an economic point of view. At the same time the use of directed credit programs with large subsidies and little selectivity have led to massive failures in many developing countries.

Unfortunately, neither economic theory nor the empirical literature offer clear, unequivocal answers on the effectiveness and efficiency of credit policies. Economic theory is preoccupied with formal modeling based on abstract and implausible assumptions. In its increasingly mathematical form it uses precise definitions of concepts that bear little relationship to the imprecise and fuzzy nature of the factors that influence economic behavior in the real world. For its part, most of the empirical literature suffers from the GIGO syndrome as most of the collected data do not correspond in substance or quality to the data that would be required for a proper empirical testing of competing theories.

With no clear guidance from theory and with conflicting evidence from the experience of different countries with directed and "undirected" financial systems it is difficult to be very dogmatic about the role of credit policy in promoting industrialization and economic growth. A pragmatic approach along the lines advocated in the following passage from the concluding chapter of the 1989 World Development Report on Financial Systems and Development seems most appropriate until more robust evidence can be produced in favor or against the use of credit policy as an instrument of an active industrial policy.

"In most developing countries government intervention in the allocation of credit has been extensive. Although a degree of intervention may have been useful during the early stages of development, many countries have come to recognize that this policy has had an adverse effect on industrial and financial development. The evidence suggests that directed credit programs have been an inefficient way of redistributing income and of dealing with imperfections in the goods market. Some programs that were well designed and narrowly focused, however, have been reasonably successful in dealing with specific imperfections in the financial markets, such as a lack of risk capital. In the future, governments should attack the conditions that made directed credit appear desirable - imperfections in markets or extreme inequalities in income - instead of using directed credit programs and interest rate subsidies.

Many governments are unwilling to eliminate directed credits entirely but are nonetheless increasing the flow of credit to the private sector and reducing their own role in credit allocation. Two principles should guide the design of any remaining programs. First, there can be only a limited number of priority sectors: a wide variety of directed credit programs means that nothing is being given priority. Second, governments should be conscious of how little information they have in relation to the information they would need to price credit for different sectors appropriately.

With regard to interest rates, the aim should be to eliminate the difference between the subsidized rate and the market rate. The lowest interest rate should not be less than the rate charged by the commercial banks to prime borrowers. Increasing the availability of credit to priority sectors should be the main focus of the remaining directed credit programs, since experience has shown that generous subsidies badly distort the allocation of resources.

Charging nonprime borrowers the prime rate implies a subsidy to the extent of the added risk and administrative costs. Instead of forcing the banks to cover these cost by charging other borrowers more or paying depositors less, the authorities would be better advised to bear the costs themselves. Directed credit administered through central bank rediscounts rather than through quantitative allocations forced on the banks promotes voluntary lending. Governments should not, however, let central bank rediscounts become a significant source of monetary expansion. Sectors that require large subsidies should be dealt with in the budget, not through credit allocation.

Finally, it seems more defensible to provide directed credits for certain activities (for example, exports or research and development) or for specific sorts of financing such as long-term loans than to target specific subsectors such as textiles or wheat. Targeting specific sectors is too risky in a world of shifting comparative advantage." (World Bank, 1990, p. 111)

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